

STATE OF ALASKA
DEPT. OF ENVIRONMENTAL CONSERVATION

File: PSD IV
ARCS / 54110
Prudhoe FS2
JAY S. HAMMOND, GOVERNOR

POUCH 0 - JUNEAU 99811

October 7, 1981

Kevin C. Myers
Senior Engineer
ARCO Alaska Incorporated
P.O. Box 360
Anchorage, Alaska 99510

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Dear Mr. Myers:

The Department has received your August 19, 1981, application for Air Quality Permits to Operate new turbines and heaters at Flow Stations 1, 2, 3, and The Seawater Treatment Plant Platform in the Prudhoe Bay area. Upon review of the information submitted in the application and the documents entitled "PSD Permit Application for New Sources to be Added to Existing and Previously Permitted Facilities in the Prudhoe Bay Unit (PSD IV)", dated 30 January 1981, and "Air Quality Impacts of the Prudhoe Bay Unit PSD IV Sources as Estimated by the Texas Climatological Model (TCM-1)", dated 1 June 1981, the Department has determined:

- a) The increased emissions of nitrogen oxides, particulate matter, sulfur dioxide, and carbon monoxide will not cause violations of the Alaska ambient air quality standards and increments specified in 18 AAC 50.020.
- b) Sulfur dioxide and particulate matter emissions from the turbines will not exceed the allowable emission standards specified in 18 AAC 50.050, so long as natural gas is utilized as the only fuel.
- c) Use of unapproved air quality dispersion models and associated analytical techniques for purposes of projecting the ambient air quality impacts of the proposed and previously permitted sources has resulted in predicted impacts which are believed to be overly conservative. However, the modeling results indicate a relatively large increase in ambient impacts, primarily associated with the assumed occurrence of atmospheric downwash of emitted pollutants. A considerable degradation of air quality is projected with respect to human exposure of nitrogen dioxide which, if proved to be true, may necessitate limitations or other constraints upon future industrial growth in the Prudhoe Bay area in order to maintain acceptable air quality. In consideration of this, it may be desirable to verify the projected values by initiation of an ambient monitoring network to measure actual concentrations of oxides of nitrogen in addition to the associated meteorological conditions.

Mr. Kevin C. Myers

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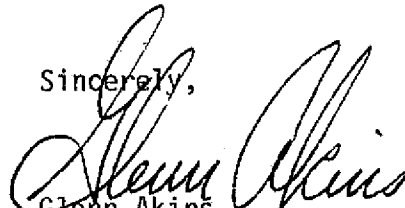
October 7, 1981

Therefore, Air Quality Permits to Operate 8230-AA011, 8230-AA012, 8230-AA013, and 823-AA014 are granted for the construction, installation, and operation of new turbines and heaters to be located at Flow Stations 1, 2, 3, and The Seawater Treatment Plant Platform. These permits amend previous permits AQC-138B, 381C, 433B, and 531A. Please note that each permit contains six or seven conditions which must be complied with and that the permits expire January 30, 1985. You should request a renewal at least 30 working days prior to their expiration date.

The new turbines must also comply with certain federal standards promulgated in 40 CFR 60 Subpart GG on September 10, 1979. Please contact Wayne Grotheer, of the U.S. Environmental Protection Agency, Region X, Office in Seattle, for specific requirements. These facilities must also be reviewed for compliance with the Prevention of Significant Deterioration Provisions of the Clean Air Act Amendments of 1977. Michael M. Johnston of the U.S. Environmental Protection Agency, Region X, Office in Seattle, is responsible for this review.

You have a right to an adjudicatory hearing to contest the Department's action. A request for an adjudicatory hearing must be made within 30 days of receipt of this letter by mailing or delivering a statement of issues to the Alaska Department of Environmental Conservation, Pouch O, Juneau, Alaska 99811. The statement of issues must state the basis for the hearing request and otherwise conform with 18 AAC 15.200. A failure to request a hearing within 30 days of receipt of this letter constitutes a waiver of your right to administrative or judicial review of this action.

Sincerely,


Glenn Akins
Deputy Commissioner

Enclosure: 8230-AA011
8230-AA012
8230-AA013
8230-AA014

cc: Doug Lowery - NRO
Michael Johnston - EPA Seattle
Jim Sweeney - EPA Anchorage

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY CONTROL
PERMIT TO OPERATE

Permit No. 8230-AA012
Amends Permit No. AQC-381C

Date of Issue: 10/6/81

The Department of Environmental Conservation, under authority of AS 46.03 and 18 AAC 50.400, issues an Air Quality Control Permit to Operate to

ARCO ALASKA INCORPORATED
P.O. BOX 360
ANCHORAGE, ALASKA 99510

for the operation of the Flow Station No. 2, associated fuel burning equipment and safety flaring system, as listed in Exhibit A of this permit and described in the Atlantic Richfield Company Air Quality Control Permit to Operate application dated June 16, 1975, with attached Engineering Report, application dated December 19, 1978, PSD permit application submitted to U.S.E.P.A. August 2, 1978, ARCO Oil and Gas Company letter dated May 16, 1979, Radian Corporation "PSD Permit Application for the Prudhoe Bay Unit Produced Water Injection, Low Pressure Separation and Artificial Lift Project" dated 28 September 1979, ARCO Oil and Gas Company letter with attachments dated March 5, 1980, and Radian Corporation Technical Note "Air Quality Impacts in the Prudhoe Bay Oil Field Resulting from an Exchange of Emission Sources" dated 3 December, 1980, Radian Corporation "PSD Permit Application for New Sources to be Added to Existing and Previously Permitted Facilities in the Prudhoe Bay Unit (PSD IV)" dated 30 January 1981, Radian Corporation's Technical Note "Air Quality Impacts of the Prudhoe Bay Unit PSD IV Sources as Estimated by the Texas Climatological Model (TCM-1)" dated 1 June 1981 and ARCO Alaska Incorporated letter with attachments dated August 19, 1981.

Located at Prudhoe Bay, Alaska; Section 11, Township 11N, Range 14E, UM

Under the conditions:

1. Permittee shall comply with the State Ambient Air Quality Standards and increments established in Section 020 and the applicable emission limitations specified in Section 050 of the State Air Quality Control Regulations 18 AAC 50.
2. An Air Contaminant Emission Report, as described in Exhibit A, shall be submitted to the Department semiannually by July 30 and January 30 each year.
3. Permittee shall maintain and operate all fuel burning equipment to provide optimum fuel burning efficiency during all operating periods.

Air Quality Control Permit to Operate 8230-AA012 (cont.)

4. In the event of an Emergency Shut Down (ESD) of the Flow Station and subsequent failure of the automatic well shut-in systems, open burning of flammable liquids is permitted.
5. The Department, with permittee's approval, is allowed access to permittee's facilities to conduct scheduled or unscheduled inspections or test to determine compliance with this permit and State environmental laws and regulations.
6. A copy of this permit shall be clearly displayed, and the State Air Quality Control Regulations 18 AAC 50 kept on file, at the permitted facility location.

This permit expires 30 January 1985 and may be suspended or revoked in accordance with 18 AAC 50.310.

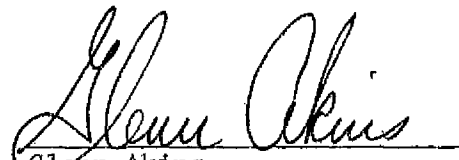

Glenn Akins
Deputy Commissioner

EXHIBIT A
PERMIT TO OPERATE 8230-AA012
AIR CONTAMINANT EMISSION REPORT

A notarized Air Contaminant Emission Report shall be submitted to the Department semiannually by January 30 and July 30 each year. The report shall include, but not be limited to, the following information.

NAME OF FIRM
LOCATION OF FACILITIES
PERIOD OF REPORT

1st	2nd	3rd	4th	5th	6th
Month	Month	Month	Month	Month	Month

1. DAYS OPERATED (number of hours or days)
2. FUEL CONSUMPTION
 - a) 2 natural gas turbines (total mmcf in these units)
installed prior to
2 Aug 1978 totaling
24,000 HP

6 natural gas heaters
installed prior to
2 Aug 1978 totaling
100 mm Btu/hr
 - b) 6 natural gas turbines (total mmcf for these units)
installed after 2 Aug 1978
totaling 114,000 HP

1 natural gas heater
installed after 2 Aug 1978
totaling 100 mm Btu/hr
 - c) flaring system, modified (hours flaring and mmcf gas
after 2 Aug 1978 other than pilot/sweep gas)
 - d) emergency diesel generator (gallons)
3. Include summary results of each NO-NO₂ and SO₂ source test conducted pursuant to 40 CFR 60.332 and 40 CFR 60.333 within thirty (30) days following each test. Include date, testing method, sampling train, fuel burning rate of turbine(s), heat content of fuel, % isokinetic test conditions, pollutant emission rate and concentration, stack exhaust gas flow rate (actual and corrected to standard conditions), stack exhaust temperature and stack exhaust water vapor content.

Permit to Operate 8239-AA012 Exhibit A (cont.)

4. In the report due January 30, include a list of all individual fuel consumption units operating during any part of the previous year and also identify which project it is associated with.
5. Attach a summary of any monitoring data assembled and excess emissions reports prepared if done pursuant to requirements specified in 40 CFR 60.334.
6. Report to the Regional Environmental Supervisor, Northern Regional Office, P.O. Box 1601, Fairbanks, Alaska 99707, phone (907)-452-1714. open burning of flammable hydrocarbon liquids as a result of an emergency shut down (ESD) within twelve (12) hours of the incident.
7. Attach a detailed description of equipment failures or operating conditions which may have adversely affected air contaminant emissions. A preliminary report of the incident shall be submitted to the Regional Environmental Supervisor, Northern Regional Office, P.O. Box 1601, Fairbanks, Alaska 99707, phone (452-1714) within five (5) working days of the incident.

Include such information as: date of incident, duration, nature of the occurrence, equipment failures, steps taken to minimize emissions, measures taken to avoid recurrence, and a general description of the weather. A separate report is required for each incident.

8. Signature of authorized agent preceded by the statement:
"I _____, being first duly sworn, hereby certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate."
9. Notarization: "Subscribed and sworn to before me this _____ day of _____ (month), _____ (year) _____ (city & state)."

Notary Public's Signature
commission, date of expiration,
seal.